REMARKS

Claims 1, 12, 17 and 18 are amended herein to recite a dual wire winding machine having at least two mandrels for winding wire thereon. The dual mandrels are discussed throughout Applicant's Specification. No new matter is added.

Objected-to claim 7 is cancelled, and the subject matter of claims 1, 6 and 7 incorporated into new claim 21. Claim 21 is thus claim 7 rewritten in independent form, including all limitations of the base claim and any intervening claims. Claim 21 is thus in form for allowance, as indicated at Final Office Action (paper 12) p. 9, paragraph 30.

The Examiner maintained rejections of independent claims 1, 12 and 17 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,499,775 to Vander Groef ("Vander Groef") in combination with U.S. Patent Application No. 2001/0039190 to Bhatnagar ("Bhatnagar"). Vander Groef discloses and teaches a single-mandrel wire winding machine. As amended, claims 1, 12 and 17 recite a dual wire winding machine having at least two wire winding mandrels. As discussed extensively in Applicant's Specification, a dual-mandrel wire winding machine is a significant and nonobvious advance over a single-mandrel wire winding machine. The dual-mandrel wire winding machine provides for a continuous output of wound wire packages, as the machine may wind a new package on one mandrel while an operator removes a previously wound package from the other mandrel. p. 2, lines 11-17. As the combination of Vander Groef with Bhatnagar does not disclose every claimed limitation, the § 103 rejections cannot stand. MPEP § 2143.

In addition, claim 1 is amended herein to recite that at least one signal related to switching a wire winding operation from one wire winding mandrel to another is transmitted from the portable operator console to the controller. This amendment is supported at p.9, lines 10-13: "Operator console station 400 . . . allows for direct control of the operating parameters of wire winding machine 300. . . . A safety interlock, such as a footswitch 401, is also a part of the console station 400." "[F]ollowing the removal of a package from a wire winding mandrel 324,

the safety interlock 401 must be actuated [prior to winding another package on the mandrel]." p. 26, lines 11-12. Thus, amended claim 1 recites a portable operator console that sends not only commands related to a wire winding procedure to a controller, but additionally sends to the controller a signal related to switching a wire winding operation from one wire winding mandrel to another.

Claim 1 recites a wire winding machine with a portable operator console. The Examiner stated that Bhatnagar discloses a portable console connected to its configurable controller, citing to paragraph 45. That paragraph states:

> The said user interface circuitry is configurable for receiving user input though an infrared/ultrasonic/radio-frequency remote entry device, by means of configuration data supplied by the said configuration memory.

A "remote entry device" is not necessarily a portable device. For example, a common configuration for residential garage door openers includes a remote console affixed to the exterior of the house, into which a user may enter a code to actuate the opener. When installed in an existing home, to obviate the need to run wires, the remote console may communicate with the opener via a RF, IR or ultrasonic channel. The console, a "remote entry device" is not portable; it is permanently affixed to an exterior wall. Indeed, nothing about the term "remote entry device" – or the fact that its communication channel is wireless – inherently implies portability.

The Examiner asserted, "[T]he configurable controller of Bhatnagar can be configured to receive input from a portable device." (emphasis added). This assertion states a mere possibility – there is no support in the cited disclosure of the Bhatnagar reference for a portable device. Bhatnagar discloses only receiving inputs wirelessly from a remote entry device. While it may be possible that a remote entry device may also be portable, since Bhatnagar is silent on the issue, the portability of a remote entry device is mere speculation on the Examiner's part. The Examiner based his rejection of Applicant's claims on that very speculation: "This portable device clearly reads on the claims . . ." p. 2, last non-numbered paragraph (emphasis added).

Which portable device? None is disclosed in Bhatnagar which discloses only a remote entry device. To establish the prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974), MPEP § 2143.03. As Bhatnagar does not teach or suggest a portable operator console, claim 1 is patentably nonobvious over the proposed combination.

The Examiner has failed to establish a prima facie case of obviousness. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so. MPEP § 2143.01. The Examiner offered as such motivation to modify Bhatnagar, "because it provides a configurable way to provide flexibility and optimization of control in the intended application, at a low cost." This statement is lifted directly from paragraph [0001] of the Bhatnagar reference. First, that statement applies to Bhatnagar's configurable controller, as disclosed in the Bhatnagar patent. Since it is reasonable to assume that Bhatnagar would have included any beneficial modification to his controller in his patent application, Bhatnagar's assertion about the applicability of his controller cannot possibly be a motivation to modify it in a manner he never considered. That is, the Examiner has taken, verbatim, Bhatnagar's statement of the benefits of Bhatnagar's controller as disclosed, and transmogrified it into a motivation to alter the disclosed controller by combination with an unrelated reference. The precisely identical words cannot, logically or legally, simultaneously stand for both diametrically opposed propositions.

Moreover, the Examiner has offered no explanation of how or why a configurable controller provides "flexibility" or "optimization of control" for a wire winding machine controller, or how or why it does so "at a low cost." It is legally insufficient to lift this self-laudatory description of the universal applicability of Bhatnagar's invention – as disclosed – and recite it as motivation to modify Bhatnagar's invention for use with Vander Groef (or any other prior art reference). What about Vander Groef's control panel is "inflexible," and precisely how does Bhatnagar's configurable controller provide it the desired "flexibility?" How does Bhatnagar's

configurable controller "optimize" Vander Groef's control panel, and what benefit does such "optimization" provide? How does Bhatnagar's configurable controller reduce the cost of Vander Groef's control panel? The Examiner has identified no shortcoming or deficiency whatsoever in Vander Groef's control panel, and has provided no explanation of how such deficiency is addressed by the proposed modification of Bhatnagar's configurable controller. Rather, the Examiner has merely repeated a statement from Bhatnagar verbatim, with absolutely no attempt to explain its applicability to Vander Groef or any other wire winding machine.

As Applicant explained in a previous response, a configurable controller does not provide any beneficial "flexibility" to a wire winding machine, does not provide any "optimization of control," and increases – does not reduce – costs. Bhatnagar's invention is a controller with configurable inputs and outputs, and is directed to the control of a broad variety of different applications, by reconfiguring the inputs and/or outputs as required for each application:

> What is therefore required is a device that is designed for the specific requirements of control applications, including the requirements of interfacing to input and output devices in a variety of different ways, using an appropriate set of circuit elements in an arrangement that is configurable for any of the desired functions.

Bhatnagar, [0011] (emphasis added). The ability of a configurable controller to reconfigure its inputs and outputs to interface to different devices in different ways is simply inapposite to the control of a wire winding machine. Applicant's wire winding machine has a dedicated, tightly integrated controller "for coordinating the axial position of said traverse with the radial position of each said mandrel to wind wire onto said mandrel in a predetermined package." Claim 1. Nothing about this functional requirement would benefit in the least from the ability to reconfigure an input as, e.g., a current bias, balanced bridge, ADC, DAC, debounced switch, filter, averager, or the like. Bhatnagar, [0039] – [0043]. Nor would Applicant's wire winding machine benefit from a controller wherein the outputs may be configured as ON/OFF switches, PID controllers, RTC, level or pulsed outputs, triac or relay controls, phase-angle, half-cycle, or

integral cycle controls, or the like. Bhatnagar, [0033] – [0038]. At the very least, the Examiner has provided no explanation based on logic and sound scientific reasoning to support a holding of obviousness over the proposed combination. Ex parte Levengood, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).

Regarding claim 17, the Examiner stated, "the actual subject matter of the current claims is directed to network based control of an industrial system." p. 3, paragraph 3. The Examiner then professed to be confused that the field of endeavor of Applicant's invention is wire winding machines. "This is confusing to the examiner considering the claims are all directed to electronic controllers." p. 4, paragraph 4. All rejected claims are explicitly directed to a dual wire winding machine or a method of remotely programming a dual wire winding machine. The title of the application is "Wire Winding Machine with Remote Pedestal Control Station and Remote Programming Capability." Applicant's 32-page Specification and 36 drawing figures are unambiguously and solely directed to a dual wire winding machine and its constituent subsystems and peripherals.

More particularly, claim 17 is directed to "[a] method of remotely programming a dual wire winding machine," which machine has "two wire winding mandrels for winding wire thereon." Claim 17 recites inputting highly specific, particularized information into a remote terminal, to wit, "information to coordinate the axial position of a traverse with the radial position of each said mandrel to wind wire onto said mandrel in a predetermined package." The recited specificity of that information is an explicit claim limitation. Claim 17 recites directing the wire-winding control information to a network between the terminal and the "dual wire winding machine." Finally, claim 17 recites transferring the control information from the network to the controller, "to program the operation of said dual wire winding machine to wind wire in said predetermined package."

Claim 12 is directed to a "dual wire winding machine." Claim 12 recites "two wire winding mandrels for winding wire thereon," and "a traverse for directing wire axially along each

said mandrel." Claim 12 recites "a controller" for performing a precise, dedicated, and highly specialized function, to wit, "for coordinating the axial position of said traverse with the radial position of each said mandrel to wind wire onto said mandrel in a predetermined package." This functional requirement is an explicit limitation of the claim. Finally, claim 12 recites, "a remote interface for communicating at least one command related to a wire winding procedure" between the controller and a remote data terminal.

Claim 1 is directed to a "dual wire winding machine." Claim 1 recites "two wire winding mandrels for winding wire thereon," and "a traverse for directing wire axially along each said mandrel." Claim 1 also recites a controller for performing a particular and highly specialized task, to wit, "for coordinating the axial position of said traverse with the radial position of each said mandrel to wind wire onto said mandrel in a predetermined package." Finally, claim 1 recites, "a portable operator console" operative to receive "at least one command related to a wire winding procedure and at least one signal related to switching a wire winding operation from one said wire winding mandrel to another" and to transmit the command and signal to the controller.

All of these recitations of a wire winding machine, components of a wire winding machine, functions performed by the wire winding machine and its components, and methods of remotely programming the wire winding machine and its components are explicit limitations of the claims, and cannot be ignored or discounted. The Examiner's mischaracterization of Applicant's invention as a generic industrial controller is untenable – by the plain language of the claims, the invention is manifestly a wire winding machine and a method of remotely programming a wire winding machine. The relevant level of ordinary skill in the art is one ordinarily skilled in the design and programming of wire winding machines to wind wire into predetermined packages – in particular, by controlling the axial movement of a wire-guiding traverse with the angular position of a wire winding mandrel, as plainly recited in the claims.

The Examiner has cited no prior art disclosing, teaching or suggesting the specific and highly specialized remote programming of a wire winding machine via a data communications network. None exists. Applicant's inventive, remotely-programmable controller, with a portable operator console, is novel and nonobvious, and represents a significant advance in the state of the art of wire winding machines.

Claims 1, 12, 17 and 21, and all claims depending therefrom, being patentably nonobvious over the cited art, the prompt allowance of all pending claims is hereby respectfully requested.

Respectfully submitted,

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